

REMARKS

Reconsideration and removal of the grounds for rejection are respectfully requested.

Claims 29-50 were in the application, claims 37, 38, 40 and 47 have been cancelled, claim 50 amended and new claims 51 and 52 have been added.

The examiner objected to claims 37, 38 and 47 as failing to further limit claim 28. So as to render this rejection moot, claims 37, 38 and 47 have been cancelled with claims 37 and 38 presented in independent form as new claims 51 and 52. The fee for adding these additional independent claims is enclosed herewith.

Claim 50 has also been amended to now depend from claim 43, rendering moot the rejection of this claim.

Claim 40 was rejected as lacking enablement or as being indefinite. While the applicant disagrees with the examiner, claim 40 is being cancelled without prejudice, so as to reduce the issues on appeal, and not as a surrender of subject matter.

Entry of these amendments is requested to reduce the issues on appeal, and/or to place the application in condition for allowance.

Claims 37 and 38 were also rejected as being indefinite. While rendered moot by their cancellation, the structural impact of the claim limitations are apparent from a review of new claims 51 and 52. The charge dependant impeding means are structurally limited as these means act as an internal switch during the charging cycle, and the limitations of claims 37 and 38 further defining the switching action, that is, the function performed by these means. To illustrate, to infringe, one must have an electrochemical cell as defined having means for performing the described function, or an equivalent thereof. These limitations thus measure the invention and are positive structural limitations, and the examiners rejection was improper.

Claim 29, 37-44 and 46-50 were rejected as being anticipated by JP '785. Here again, the examiner has improperly disregarded functional language in the claims prior to determining their patentability, as the claims as a whole must be considered for patentability, not a dissected version.

The line of cases the examiner cites do not abdicate this requirement, nor are they particularly relevant to the interpretation of the claims in the present case. In re Casey, 370 F.2d 576 (CCPA 1967), dealt with machinery which works upon an article or material and is so limited. See MPEP 2115. The present apparatus claims are not to machinery, but to a combination of specific elements, one of which is in means plus function form, that together make up the inventive electrochemical cell.

In re Otto, 312 F.2d 937 (CCPA 1963), dealt with a hair curler and how the hair curler was used to wave hair. Again, it was the effect on the article, the hair, that did not structurally distinguish from the prior art.

In re Danly, 263 F.2d 844 (CCPA 1959) is actually instructive on the distinction to be made. The following claims were presented on appeal. Claim 1 was rejected and upheld as such because it lacked the requisite structure for actual connection to an alternating current source, the language in issue underlined below:

1. A power press tie rod heating system, including in combination a press frame, a tie rod for holding the press frame in assembled position, one end of the tie rod being formed with screw threads, a nut positioned about the screw threads, insulating means positioned between the nut and the press frame insulating the tie rod and nut from the frame, means secured to the other end of the tie rod bearing against the press frame, insulating means positioned between said last named means and the press frame, electrical connection

means secured to the nut end of the tie rod, and electrical connecting means secured to the other end of the tie rod, means for insulating the tie rod from the press frame intermediate its ends, the construction being such that alternating electric current may be passed through the tie rod to heat the same.

Note however that claim 7, which modified this language to refer to connection means, was allowed:

7. A power press tie rod heating system, including in combination a press frame, four tie rods for holding the press frame in assembled position, nuts secured to the upper ends of the tie rods, nuts secured to the lower ends of the tie rods, means for insulating the nuts from the press frame, means for insulating the tie rods from the press frame, a bus bar for connecting the upper ends of a pair of adjacent tie rods to each other, a second bus bar parallel to the first bus bar for connecting the other pair of upper ends of tie rods to each other, a third bus bar disposed substantially at right angles to the first two bus bars for connecting the lower ends of a pair of adjacent tie rods to each other, and means for connecting the lower ends of the other two tie rods to a source of alternating current potential.

A comparison to the claims in issue shows the language to be comparable to claim 7, not claim 1, and this case supports the patentability of applicants' claims.

Ex parte Masham, 2 U.S.P.Q.2d 1647 (POBA 1987), dealt with an old apparatus with a “new” claim element consisting of written instructions applied thereto. Putting the instructions on the apparatus did not distinguish since the instructions were inherent with the old machine. Of note, however, this limitation was not ignored, as were the functional portions of the claims here.

These cases make clear that it was clearly improper for the examiner to ignore critical claim limitations.

Claim 29 is quite specific - it requires “charge dependant impeding means”. This is defined as "charge dependant impeding means... having a constituent thereof bonded to the negative electrodes, for forming a barrier for impeding the gassing charge". The "charge dependency" is further defined by the activation/inactivation of these means. In essence, the means act as a switch, but with very specific functions. This switch must be “activated by the charging portion corresponding to the gassing charge and deactivated below the gassing charge.” Activation is defined as impeding the gassing charge to limit gas generation, and when deactivated, having substantially no charge limiting effect, and no effect during the discharge cycle. Such specific function is related to the structure of the barrier. Not every barrier will provide such charge dependant impeding means, and the structure relates to the bond between the electrode surface and the charge dependant impeding means.

These are not statements of intended use but the functional characteristics that define these means, and as such, these limitations cannot be ignored.

An apt analogy is drawn to computer data. In In re Lowry, 32 F.3d 1579 (Fed. Cir. 1994), a patent contained claims to a memory containing a stored data structure. In evaluating patentability under sections 102 and 103, the Board refused to give patentable weight to the claimed data structure, analogizing the structure to printed matter, which cannot distinguish from the prior art “unless the printed matter bears a new and non-obvious functional relationship with the substrate.” The Federal Circuit reversed. The Court stated that “the PTO did not establish that the attributed data objects [ADO's],

within the context of the entire claims, lack a new and non-obvious functional relationship with the memory... in sum, the ADO's perform a function." Id. at 1584 (emphasis added).

The Court noted that the burden of establishing the absence of a novel, non-obvious functional relationship rests with the PTO, and held the "Lowry's claimed invention involves an organization of information and its interrelationships which [the prior art]...neither discloses nor suggests".Id.

In the same way, the applicants' invention is not simply a barrier but a barrier formed using charge dependant impeding means and the organization and interrelationship between the charge dependant impeding means and the negative electrode, as detailed by reading the entire claim, are not found in the prior art patents.

Another related case is In re Gulak, 703 F.2d 1381 (Fed. Cir. 1983). Again, this dealt with a "printed matter" rejection, and the printed matter was disregarded in determining patentability.

The Court stated the following:

"Appellant and the board agree that the sole difference between the appealed claims and Witcoff resides in the content of the printed matter. The board declined, however, to accord that printed matter patentable weight. ...[However] the Board cannot dissect a claim, excise the printed matter from it, and declare the remaining portion of the mutilated claim to be unpatentable. The claim must be read as a whole. If the Board meant to disregard the basis principle of claim interpretation, we must reverse the rejection as a matter of law. Id. at 1386.

The examiner has dissected applicants' claim and declared remaining portions of the mutilated claim unpatentable, reasoning that all statements of function cannot refer to structure. However, only "a barrier" erected with charge dependant impeding means, as defined by the claim, meets the claimed invention. The examiner cannot ignore the function of the means, which is clear error.

A means plus function limitation by definition, recites a function to be performed and is construed "to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. §112, P6; Odetics, Inc. V. Storage Tech. Corp., 185 F.3d 1259, 1266-67 (Fed. Cir. 1999). For example, it was held that a limitation used to define a radical on a chemical compound as "incapable of forming a dye with said oxidizing developing agent" although functional, was perfectly acceptable because it set definite boundaries on the patent protection sought. In re Barr, 444 F.2d 588, 170 USPQ 33 (CCPA 1971).

Given the above, the anticipation rejections which do not consider the claims as a whole are improper and must be withdrawn.

As to the specific rejections made, it is evident that these rely solely on the mistaken belief that the claims are "method of making claims, or include statements of "intended use". The claims recite an electrochemical cell containing specific structure, namely a barrier formed by the charge dependant impeding means which performs a specific novel and unobvious function.

The distinction as to JP '785 is structural, not intended use. The fatty acid is disposed in the negative electrode, not in the electrolyte. The examiner's speculation as to manufacture is misplaced. The electrochemical cells of JP '785 have no fatty acid disposed in the electrolyte. The fatty acid, stearic acid, is insoluble in sulfuric acid and cannot be disposed in the electrolyte, as fatty acids are soluble only in excess sodium hydroxide, that is, at pH's above 7.0. This is

confirmed in the '785 patent abstract and in Paragraph 0016. Note that n-alkyl benzyl ammonium chloride, for example, dissolves readily in battery acid.

“Coating” the face of the negative electrode with the fatty acid is not the same structure as the head and tail attachment of the present invention. The difference in function and advantages is made quite clear by the unexpected improvement in performance obtained. Mr. Fitter explained the distinction in orientation as important to the performance improvement. Even using the same compound, a higher concentration causes an edgewise orientation and the barrier lost its “charge dependant” characteristic. It is the barrier of the claim that must be found in the cited art, not just any barrier, and the barrier of the claim is formed only by "charge dependant" impeding means, the charge dependency related to the orientation of the molecules.

The examiner may not disregard the inventor's Declaration and rely on his own speculations. Mr. Fitter referenced a technical publication and a test he actually performed. This is actual evidence supporting his “opinion”. The examiner has no such evidence for his speculation and it was error to disregard the Fitter Declaration as merely opinion.

Given that the cited patent does not provide the barrier with improved performance as detailed previously, the rejection over JP '785 as being anticipated should be withdrawn.

The rejection of claims 19-31, 34-38, 40 and 42-49 as being anticipated by JP '728 is similarly traversed. As stated above, all the limitations of the claims must be considered, and this includes the charge dependant impeding means performing the recited function. Mr. Fitter demonstrated that over 1%, the charge dependency is lost. The reference uses 3% dodecyldimethyl benzyl ammonium chloride, well above this range and so the charge dependant impeding means cannot be present.


For a means plus function element to be anticipated, the prior art element must perform the identical function specified in the claim in substantially the same way and produce substantially the same result. Remco Sales Inc. V. Control Papers Co. 208 F.3d 1352 (Fed. Cir. 2000). As the identical function is not found, these claims cannot be anticipated, as it is not inherent that the function occurs at the high concentration.

As to the provisional double patenting rejection, the applicant reserves the right to file a terminal disclaimer in response once all other issues are resolved.

Based on the above amendment and remarks, favorable consideration and allowance of the application is respectfully requested. However should the examiner believe that direct contact with the applicant's attorney would advance the prosecution of the application, the examiner is invited to telephone the undersigned at the number given below.

Coleman Sudol Sapone P.C.
714 Colorado Avenue
Bridgeport, CT 06605
Telephone No. (203) 366-3560
Facsimile No. (203) 335-6779

Respectfully submitted,



William J. Sapone
Registration No. 32,518
Attorney for Applicant(s)